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Docket No.: A-2829

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MAIL STOP: APPEAL BRIEF-PATENTS

By: 

Date: May 17, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applic. No. : 09/852,348 Confirmation No.: 4692
Inventor : Lutz Richter et al.
Filed : May 9, 2001
Title : Gathering Stapler with Separate Drives
and Method of Operating the Gathering
Stapler
TC/A.U. : 3721
Examiner : Gloria R. Weeks
Customer No. : 24131

Hon. Commissioner for Patents
Alexandria, VA 22313-1450

BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office action dated December 15, 2003, finally rejecting claims 6, 8, 10-12 and 14-25.

Appellants submit this *Brief on Appeal* in triplicate, including payment in the amount of \$330.00 to cover the fee for filing the *Brief on Appeal*.

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Real Party in Interest:

This application is assigned to Heidelberger Druckmaschinen AG of Heidelberg, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 6, 8, 10-12, 14 and 20-25 are rejected and are under appeal. Claims 1-5, 7, 9, 13 have been cancelled. Claims 15-19 are withdrawn from further consideration.

Status of Amendments:

No claims were amended after the final Office action. A *Notice of Appeal* was filed on March 15, 2004.

Summary of the Invention:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to a gathering stapler which has at least the following subassemblies: collecting chain, stapling carriage, stapling-displacement configuration, ejector, and delivery.

Appellants explained on page 12 of the specification, line 25, that, referring now to the figures of the drawing in detail and first, particularly, to Fig. 1 thereof, there is seen a representative example of a gathering stapler with separate drives. A drive motor M1 drives a stapling carriage 3 by means of a crank 1 and a connecting rod 2. The stapling carriage 3 is mounted on a rectilinear thrust mechanism 4. A crank 5 and a connecting rod 6 make it possible for a blade carriage 7 to be moved horizontally back and forth along a rectilinear thrust mechanism 8. A drive motor M2 is provided for a collecting chain. The collecting chain 13 is driven by means of the toothed-belt wheel 9, i.e., a sprocket 9, a toothed belt 10, a toothed-belt wheel 11, and a chain wheel 12.

Appellants outlined on page 13 of the specification, line 12, that provision is made for the two motors M1 and M2 to be activated such that the movements of the stapling carriage B1 and of the collecting chain B2 are coordinated or synchronized with one another. For this purpose, those speed profiles of the movements of the stapling elements and of the collecting chain B2 which are necessary for the stapling process are adapted to one another: as has already been mentioned, the period in which the stapling heads and the collecting chain

are at essentially the same speed in terms of magnitude and direction is selected to be as large as possible.

It is stated in the last paragraph on page 13 of the specification, line 23, that, since the speed profile of the collecting chain B2 is more or less constant, it is possible, in principle, to utilize the corresponding motor M2 as a power source for the rest of the necessary movements.

Advantageously, however, a further motor M3 is also provided for the stapling-displacement configuration B3 in order to allow, by means of a corresponding control means, a variable stapling-displacement profile or a stapling interruption. The gear mechanism 14, the toothed-belt wheel, the toothed belt 16, the toothed-belt wheel 17, the cam plates 18 and 19, the lever 20 and the tie rods 21 move the pushers 22, 23.

Appellants described on page 14 of the specification, line 9, that the drive motor M4 is provided for the delivery B4. The vertical movement of the ejector blade is realized with the aid of the drive motor M5 for the ejector B5. Depending on the format of the product to be processed and on the number of cycles, the movements of these subassemblies B4 and B5 may be coordinated with one another, with the result that it is possible to realize advantageous movement sequences, such as a

quick drawing-off operation or an ejecting operation with delay.

As set forth in the last paragraph on page 14 of the specification, line 19, Fig. 1 further includes a diagrammatic illustration of a central control device 36 which effects the controlled driving of the stapler assembly according to the invention. Each of the motors M1 ... M5 has associated therewith a separate control unit. In this case, the individual control units are illustrated as part of the central control device 36. They may, however, be located directly at the respective motor and form part of the motor assembly. The control units also include, or are connected to, respective devices that detect the rotational position (angular position sensor, rotation sensor) and or the rotational speed of the motors.

Appellants explained on page 15 of the specification, line 5, that the control units also include input/output units which allow programmable control of the drives. The control units may primarily be formed as motor controllers and/or a motor-control end stage. The central control device 36 also has a display device 37 (e.g. a computer screen) and an operating panel 38, including a keyboard, or the like.

It is further stated on page 15 of the specification, line 12, that Fig. 2 shows the essential elements of the drive of the stapling carriage B1. The motor M1 drives the crank 1 which, by means of the connecting rod 2, realizes the horizontal movement of the stapling carriage 3 along the rectilinear thrust mechanism 4. At the same time, the drive motor M1 moves a crank which, in this view, is concealed and, along with the connecting rod 6, realizes the horizontal movement of the blade carriage 7 along the rectilinear thrust mechanism 8.

The last paragraph on page 15 of the specification, line 21,, refers to Fig. 3 which illustrates the drive of the collecting chain B2. The motor M2 moves a toothed-belt wheel 9, which transmits the rotational movement to the toothed-belt wheel 11 by means of the toothed belt 10. The collecting chain 13 is thus driven via the interposed chain wheel 12.

Appellants explained on page 16 of the specification, line 1, that Fig. 4 illustrates the drive for the stapling-displacement configuration B3. The motor M3 drives the toothed-belt wheel 15 by means of a gear mechanism. The toothed-belt wheel transmits its rotational movement to the toothed-belt wheel 17 with the aid of the toothed belt 16. This drives the cam plates 18, 19, which, by means of levers

and tie rods 21, move the pushers 22 and 23 for the stapling elements.

It is further outlined on page 16 of the specification, line 9, that Fig. 5 shows the drive for the drawing-off elements of the delivery B4. The motor M4 drives the toothed belt 25 by means of a toothed-belt wheel 24. The transmission of force to the toothed-belt wheel 26 results in a rotational movement of the roller 27. At the same time, the toothed-belt wheel 28 causes the roller 29 to rotate in order, with the aid of the belts 30, to receive the ejected copies.

As set forth in the last paragraph of the specification, starting at line 17 on page 16, Fig. 6 shows the drive of the ejector B5. The motor M5 causes a toothed-belt wheel 31 to rotate. The toothed belt 34 is driven via the toothed belt 32 and the gear mechanism 33. The toothed belt 34 realizes the vertical oscillation movement of the ejector blade 35, i.e., the ejector stroke.

References Cited:

U.S. Patent No. 5,518,228 (Bodie et al.), dated May 21, 1996;
U.S. Patent No. 6,142,353 (Boss et al.), dated November 7,
2000.

Issues

1. Whether or not claims 6, 8, 10-12, 14, and 20-25 are obvious over Boss et al. (U.S. Patent No. 6,142,353) (hereinafter "Boss") in view of Bodie et al. (U.S. Patent No. 5,518,228) (hereinafter "Bodie") under 35 U.S.C. §103.

Grouping of Claims:

Claim 20 is independent. Claims 6, 8, 10-12, 14, and 21-25 depend on claim 20. The patentability of claims 6, 8, 10-12, 14, and 21-25 are not separately argued. Therefore, claims 6, 8, 10-12, 14, and 21-25 stand or fall with claim 20.

Arguments:

Claim 20 is not obvious over Bodie in view of Boss under 35 U.S.C. § 103

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 20 calls for, *inter alia*:

a plurality of subassembly drives running in continuous operation, and at least some of the subassembly drives each including a controllable motor.

It is noted that at the priority date of Boss the invention according to Bodie already was the state of the art.

The Boss reference discloses a gathering stapler, having a mode of operation corresponding to the instant application. According to this mode of operation, all of the components are continuously in operation and the components follow laws of motion which are all tuned to each other.

Despite the teaching of Bodie, Boss discloses a common drive, for which the laws of motion of the individual components are realized by using interconnected corresponding gear units.

Due to the strict mutual dependency of the sequential movements of the components in the device disclosed by Boss, the inventors deliberately avoided using respective drives with controllable motors for each of the continuously operating components, even though it was known from Bodie to provide individual components with independent drives having motors.

Therefore, for the continuously operating gathering stapler disclosed by the Boss reference, there had been prejudice toward providing a strict mechanical coupling of the individual components in order to ensure the mutual tuning of their sequential movements.

Furthermore, since the drives disclosed by Bodie are intermittently in operation at different times, and since the drives effect completely independent sequential movements of different components, the Bodie reference was not able to overcome the above-noted prejudice.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

The references do not show or suggest a plurality of subassembly drives running in continuous operation, and at least some of the subassembly drives each including a controllable motor, as recited in claim 20 of the instant application.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, the Examiner has not produced a *prima facie* case of obviousness.

Moreover, it is well settled that almost all claimed inventions are but novel combinations of old features. The courts have held in this context, however, that when "it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation **in the prior art** to make the selection made by the applicant". Interconnect Planning Corp. v. Feil, 227 USPQ 543, 551 (Fed. Cir. 1985) (emphasis added). "Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination". In re Bond, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). "Under Section 103 teachings of references can be combined **only** if there is some suggestion or incentive to do so." ACS Hospital Systems, Inc. v. Montefiore Hospital et al., 221 USPQ 929, 933, 732 F.2d 1572 (Fed. Cir. 1984) (emphasis original). "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be '**clear and particular.**'" Winner Int'l Royalty Corp. v. Wang, 53 USPQ2d 1580, 1587, 202 F.3d 1340 (Fed. Cir. 2000) (emphasis added; citations omitted); Brown & Williamson Tobacco Corp. v. Philip Morris, Inc., 56 USPQ2d 1456, 1459 (Fed. Cir. Oct. 17, 2000). Applicants believe that there is

no "clear and particular" teaching or suggestion in Boss to incorporate the features of Bodie, and there is no teaching or suggestion in Bodie to incorporate the features of Boss.

In establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the applicant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir. 1988), *cert. den.*, 488 U.S. 825 (1988). The Examiner has not provided the requisite reason why one of ordinary skill in the art would have been led to modify Boss or Bodie or to combine Boss's and Bodie's teachings to arrive at the claimed present invention. Further, the Examiner has not shown the requisite motivation from some teaching, suggestion, or inference in Boss or Bodie or from knowledge available to those skilled in the art.

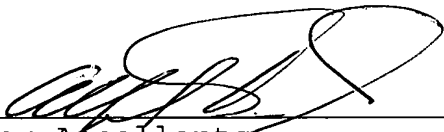
Applicants respectfully believe that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. . . . The references **themselves** must provide some teaching whereby the applicant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references.

Since claim 20 is believed to be allowable, dependent claims 6, 8, 10-12, 14, and 21-25 are believed to be allowable as well.

Based on the above-provided arguments, the honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,

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For Appellants

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Appendix - Appealed Claims:

6. The gathering stapler according to claim 23, which comprises a central control device controlling said motor control units.

8. The gathering stapler according to claim 23, wherein at least one of said motor control units includes a microprocessor.

10. The gathering stapler according to claim 23, wherein at least one of said motor control units has a programmable control device for said motor of a respective one of said drives.

11. The gathering stapler according to claim 23, wherein at least one of said motor control units has an input/output unit for programmable control.

12. The gathering stapler according to claim 23, wherein at least one of said motor control units comprises a motor controller and a motor-control end stage.

14. The gathering stapler according to claim 10, which further comprises a display device and an operating panel connected to said at least one motor control unit.

20. A gathering stapler, comprising:

a plurality of cooperating subassemblies including an
operatively revolving endless chain having a conveying strand
running in a conveying direction and conveying gathered
folded sheets;

a stapling carriage assigned to said conveying strand and
operatively oscillating in parallel with said conveying
strand for running in synchronicity with said conveying
strand in the conveying direction within certain time
segments;

stapling heads mounted to said stapling carriage and adapted
for ejecting staples;

a stapling displacement configuration adapted for activating
said stapling heads for ejecting said staples;

a delivery;

an ejector adapted for operatively oscillating in parallel
with said conveying strand for running in synchronicity with
said conveying strand in the conveying direction within

certain time segments and for operatively oscillating between said conveying strand and said delivery within a path rectilinear to said conveying strand within certain time segments; and

a plurality of subassembly drives running in continuous operation;

at least some of said subassembly drives each including a controllable motor.

21. The gathering stapler according to claim 20, wherein a first one of said plurality of subassembly drives includes a controllable motor connected to said chain and a second one of said plurality of subassembly drives includes a controllable motor connected to said stapling carriage.

22. The gathering stapler according to claim 21, wherein a third one of said plurality of subassembly drives includes a controllable motor connected to said stapling displacement configuration.

23. The gathering stapler according to claim 20, including motor control units each connected to a respective one of said motors.

24. The gathering stapler according to claim 23, wherein at least one of said motor control units includes a revolution speed detector.

25. The gathering stapler according to claim 23, wherein at least one of said motor control units includes a phasing detector.